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Mineral Industry Surveys

For information, contact:
Michael J. Magyar, Molybdenum Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4964, Fax: (703) 648-7757
E-mail: mmagyar@usgs.gov

Cindy Chen (Data)
Telephone: (703) 648-7991
Fax: (703) 648-7792
E-mail: cchen1@usgs.gov

Internet: http://minerals.usgs.gov/minerals

MOLYBDENUM IN FEBRUARY 2005

Domestic production of molybdenum in concentrate in February 2005 was about 12% more than that of the previous month and was about 86% more than that of February 2004, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 5,930 metric tons (t) at the beginning of 2005 and 6,070 t at the end of February.

According to Ryan's Notes (2005c), the February monthly average prices for U.S. ferromolybdenum (FeMo) ranged from $33.250 to $34.500 per pound of molybdenum content, compared with $36.000 to $37.125 in January. European FeMo monthly averages ranged from $67.438 to $70.125 per kilogram (kg) of molybdenum content in February as compared with $84.875 to $87.500 in January. In February, worldwide molybdenum oxide prices ranged from $28.125 to $29.063 per pound versus $32.438 to $33.438 in January.

European ferromolybdenum prices were at a high premium to oxide prices for much of 2004, sustained by antidumping duties on imports of Chinese ferromolybdenum into Europe. In the United States, the differential between the two products widened only recently, owing to less spot buying of oxide as many consumers purchased oxide on formula contracts. Before the 22.5% antidumping duty was imposed on Chinese ferromolybdenum imports in February 2002, over 55% of molybdenum used in Europe was in the form of ferromolybdenum. European consumption of ferromolybdenum in steelmaking in 2004 fell to less than 45% of the market owing to high prices and the antidumping duty. U.S. consumption of ferromolybdenum in steel production increased from 25% in the 1980s to about 45% in 2004 as some Chinese suppliers diverted their sales of ferromolybdenum to the United States owing to the antidumping duty (Ryan's Notes, 2005a).

Uncertainty reigned in the molybdenum market according to participants at the Ryan's Notes Moly Conference in New York on February 15. Supply and demand were fairly balanced in 2004 owing to a backlog in roasting that offset increased production. For 2005, the supply surplus was expected only to be about 4 weeks of demand. Most industry sources expected prices to decline gradually, but admitted that the downward path could be rocky, with some brief price rises. Nearly everyone believed that China's molybdenum export and demand behavior could undermine any market forecast for the year. The U.S. ferromolybdenum market mimicked the European market in February by dropping quickly on the basis of one sale before recovering in subsequent sales. The spread between the low and high prices was about $5 per pound. Molybdenum oxide prices were firmer, but only on inter-trade business (Ryan's Notes, 2005b).

The European Confederation of Iron & Steel Industries (Eurofer) aimed to present its case for a review of European Union (EU) antidumping duties on Chinese ferromolybdenum by the end of February 2005. Eurofer had previously expected to submit the documents to the EU in January. Noting that the price of ferromolybdenum had recently fallen, a spokesman stated that Eurofer would have to evaluate the impact that might have on the case. The campaign for a review of the 22.5% antidumping duty on Chinese-origin ferromolybdenum was started by the German Steel Federation but was handed to Eurofer in December 2004 (Metal Bulletin, 2005).

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, U.S. consumption by end use, stocks of molybdenum material in January and February 2005, and trade data for December 2004 and January 2005.

References Cited

Metal Bulletin, 2005, Eurofer delays ferro-molybdenum anti-dumping filing: Metal Bulletin, no. 8880, February 14, p. 14.

Ryan's Notes, 2005a, European FeMo slides below $70 per kg: Ryan's Notes, v. 11, no. 6, February 7, p. 3.

Ryan's Notes, 2005b, Moly remains unpredictable: Ryan's Notes, v. 11, no. 8, February 21, p. 2.

Ryan's Notes, 2005c, [untitled]: Ryan's Notes, v. 11, no. 10, March 7, p. 4.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS[1]

(Metric tons, contained molybdenum)

	2004		2005		
	January-December[p]	January-February	January	February	January-February
Production	42,100	5,870	4,150	4,640	8,790
Shipments:[2]					
Domestic	31,100	4,290	2,890	2,790	5,680
Export	11,100	1,990	1,330	1,510	2,840

[p]Preliminary.
[1]Data are rounded to no more than three significant digits.
[2]As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS[1]

(Metric tons, contained molybdenum)

	2004		2005		
	January-December[p]	January-February	January	February	January-February
Gross production	65,800	10,900	6,550	5,990	12,500
Internal consumption[2]	41,600	6,710	4,330	3,970	8,310
Gross shipments	39,100	5,340	3,770	3,860	7,630

[p]Preliminary.
[1]Data are rounded to no more than three significant digits.
[2]Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS[1]

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb-denum[2]	Ammonium and sodium molybdate	Molyb-denum scrap	Other	Total
2005, January:						
Steel:						
Carbon	46,400 r	W	--	--	W	46,400 r
High-strength low-alloy	27,600 r	17,000 r	--	--	11,300	56,000 r
Stainless and heat-resisting	151,000	64,300	--	W	6,780	222,000
Full alloy	170,000 r	228,000 r	--	--	1,510	400,000 r
Tool	49,400	W	--	--	--	49,400
Total	444,000 r	310,000 r	--	W	19,600	774,000 r
Cast irons (gray, malleable, and ductile iron)	W	9,770 r	--	--	763	10,500 r
Superalloys	71,400 r	W	--	(3)	114,000 r	185,000 r
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	127	4,730	--	--	20	4,870
Mill products made from metal powder[4]	--	--	--	--	199,000 r	199,000 r
Cemented carbides and related products[5]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	1,470	1,470
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	12,100	12,100
Other	1,090	35,400	73,400	16	16,800	127,000
Grand total	594,000 r	360,000 r	73,400	16	364,000 r	1,390,000 r
Stocks, January 31, 2005	400,000	243,000 r	5,400	25,100 r	1,020,000 r	1,690,000 r
2005, February:						
Steel:						
Carbon	34,400	W	--	--	W	34,400
High-strength low-alloy	25,700	22,500	--	--	11,300	59,500
Stainless and heat-resisting	159,000	67,500	--	W	6,780	234,000
Full alloy	191,000	200,000	--	--	1,510	392,000
Tool	47,500	W	--	--	--	47,500
Total	458,000	290,000	--	W	19,600	768,000
Cast irons (gray, malleable, and ductile iron)	W	8,740	--	--	763	9,500
Superalloys	65,000	W	--	(3)	105,000	170,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	204	2,250	--	--	20	2,480
Mill products made from metal powder[4]	--	--	--	--	123,000	123,000
Cemented carbides and related products[5]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	1,040	1,040
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,300	11,300
Other	1,090	33,000	75,000	16	16,800	126,000
Grand total	601,000	334,000	75,000	16	277,000	1,290,000
Stocks, February 28, 2005	418,000	259,000	4,140	37,500	860,000	1,580,000

rRevised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes calcium molybdate.

[3]Included in "Other" of the "Superalloys" category.

[4]Includes ingot, wire, rod, and sheet.

[5]Includes construction, mining, oil and gas, metalworking machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY[1]

(Kilograms, contained molybdenum)

	2004			
Country	January-December	January	December	2005 January
Australia	30,500	--	--	36,900
Austria	1,310,000	23,100	--	--
Belgium	6,470,000	344,000	79,500	37,400
Brazil	31,000	1,700	1,750	1,410
Canada	1,370,000	14,900	135,000	232,000
Chile	1,380,000	318,000	--	1,200
China	36,000	--	--	57,100
Costa Rica	26,700	3,280	--	1,230
India	430	--	--	--
Italy	--	--	--	35,100
Japan	5,730,000	51,000	70,700	96,000
Korea, Republic of	95,200	5,960	1,950	1,300
Mexico	3,910,000	21,700	393,000	587,000
Netherlands	14,100,000	373,000	965,000	1,080,000
Sweden	38,200	--	38,200	--
Taiwan	19,200	590	590	--
United Kingdom	8,910,000	584,000	721,000	1,140,000
Other	2,770,000	885	3,300	1,710
Total	46,200,000	1,740,000	2,410,000	3,300,000

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY[1]

(Kilograms, contained molybdenum)

	2004			
Country	January-December	January	December	2005 January
Australia	1,090	545	--	--
Canada	870,000	70,000	59,000	204,000
France	10,100	--	--	--
Indonesia	381	--	--	163
Mexico	33,700	10,300	--	--
Netherlands	--	--	--	33,300
Sweden	9,150	--	9,150	--
United Kingdom	491	--	--	--
Total	925,000	80,800	68,100	237,000

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS[1]

(Kilograms, unless otherwise specified)

	January-December 2004			January 2005		
Material	Gross weight	Contained molybdenum	Value[2] (thousands)	Gross weight	Contained molybdenum	Value[2] (thousands)
Ore and concentrates roasted	7,580,000	4,710,000	$133,000	935,000	588,000	$40,900
Ore and concentrates other	9,330,000	4,070,000	135,000	1,570,000	703,000	42,000
Molybdenum chemicals:						
Oxides and hydroxides	822,000	NA	15,800	272,000	NA	3,560
Molydates of ammonium	1,940,000	1,330,000	18,400	415,000	253,000	3,790
Molydates (all others)	254,000	116,000	1,430	5,820	1,450	41
Molybdenum orange	1,030,000	NA	4,760	65,900	NA	373
Ferromolybdenum	8,310,000	5,310,000	158,000	1,160,000	735,000	45,600
Molybdenum powders	139,000	95,200	4,930	3,060	2,080	210
Molybdenum unwrought	151,000	151,000	3,520	846	846	54
Molybdenum waste and scrap	454,000	415,000	10,200	82,200	81,500	5,370
Molybdenum wire	20,500	NA	2,010	1,540	NA	234
Molybdenum other	132,000	NA	13,700	23,100	NA	2,170
Total	30,200,000	16,200,000	501,000	4,540,000	2,360,000	144,000

NA Not available.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Customs value.

Source: U.S. Census Bureau.